show how agricultural production may be increased." The author believes that "the study of agriculture should carry over into farm operations" and that it "is failing of its real values unless it . . . . makes our farm operations more productive." The book, therefore, deals largely with agriculture as an art; generally accepted practices that give best results are stated, but the science that lies back of the practice is given scant consideration. It is a question of large importance in agricultural instruction in the high schools whether the scientific principles of agriculture do not constitute a better subject-matter for the course than the art.

There are five sections in this book devoted respectively to "Farm Crops," 181 pages; "Farm Animals," 190 pages; "Soils," 106 pages; "Horticulture," 44 pages; and "Farm Management," 60 pages. These pages are all full of interesting and important statistics giving the results of the many experiments that have been conducted at various experimental stations the world over, together with statistics of crop production and animal production. There is much historical material of interest regarding various breeds of farm stock and the introduction of methods and processes in handling crops. In fact, one is rather appalled at the immense amount of information in such encyclopedic texts in agriculture, and wonders how the teacher is going to use it. Students might readily be forced into memoriter work quite as worthless as learning the myriad dates of the old school history.

The various chapters close with good review questions and with brief bibliographies. The references in the latter would be improved by giving the publisher of each book and the price. The bibliographies might also well include references to some of the important papers put out by the experimental stations and other investigators. You miss reference to many important ones in the text. Thus a high-school pupil might well be informed regarding the important experiments of Pearl and Surface on breeding hens with high egg-production records. Indeed it seems very doubtful if, in a single case of either animal or plant breeding, the pupil using this book would have any accurate notion of the principles underlying practice or even the best practice of selective breeding. The writer feels that less space given to statistics, less to the wide range of practice touched upon, and more attention to the principles underlying agriculture would tend to produce farmers who will think out their individual problems of increasing production more surely than will instruction on the details of procedure that must be looked up as occasion demands anyway.

E. R. D.

A guide to practice in fashion drawing.—The *Student's Manual of Fashion Drawing*[1] by Edith Young, director of the Edith Young Art School, Newark, New Jersey, gives in clear and logical form a series of progressive exercises in the drawing and designing of costume and its accessories. The exercises present in detail a method based upon actual and practical procedure. The text is explicit and the diagrams clear, adequate, and well drawn. They do not lose themselves

[1] EDITH YOUNG, *Student's Manual of Fashion Drawing*. New York: John Wiley & Sons, Inc., 1919. Pp. vii+107. $2.00.

in the confusion of mere "prettiness," which is the fault of many fashion drawings. On the other hand, they possess considerable style and grace where those qualities are essential elements of the problem.

The manual is distinctly a guide to practice and to the acquirement of increasing skill. It presents with the introduction to each new principle certain basic diagrams and conventions. When the student has mastered these, they furnish a structural plan which can be modified to suit different conditions and on the basis of which the details gained by the student through his own observations may be organized. He is shown how to study and how to make use of reference material.

The book begins with a simple scheme for costume form and shows how to use it for drawing different types of costume. Then follow instructions for drawing the human figure, methods of representing the textures and characteristics of costume materials, a brief treatment of perspective, and suggestions for original designing and for decorative work. It is a satisfactory book and succeeds throughout in attaining its aim of furnishing text and drawings which show students how to study. They are not merely directions to be followed literally and drawings to be copied.

WALTER SARGENT

A course in physical education for the public schools.—It is refreshing to find two officers of the United States Army, presumably schooled in the well-known system of setting-up exercises, proposing a program of physical education for the public schools such as is described in *Health by Stunts*.[1] Naturalism has for years urged the abandonment of the unnatural "worn-out, tedious, exacting drills and gymnastic movements" in physical-education courses and the utilization in their stead of native tendencies to action. It has remained for someone to organize in detail and operate a satisfactory physical-training curriculum based upon such fundamental reactions as running, jumping, chasing, dodging, kicking, wrestling, throwing, striking, climbing, and the instincts of play, rivalry, and co-operation.

In the book under discussion it seems to the reviewer that the authors have made a definite contribution toward the solution of this interesting problem. As assistant supervisors of physical education in the Detroit public schools, they have had an opportunity to try out their plan. The results have apparently been excellent. The plan seems to have been especially well adapted to boys of the junior high-school age.

A helpful outline and calendar of the course appears on pages 38 and 39. More than two hundred specific activities are listed in a temporal sequence for use through the school year and grouped in the following classes: (1) athletic events; (2) stunts (individual and combination); (3) contests; and (4) games. Methods of handling the more important activities are described. In addition the book presents a carefully worked out plan of administration as well as charts of record performances.

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[1] N. H. PEARL and H. E. BROWN, *Health by Stunts*. New York: Macmillan Co., 1919. Pp. xi+216. $1.30.